

MULTIMEDIA



UNIVERSITY

STUDENT ID NO

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# MULTIMEDIA UNIVERSITY

## FINAL EXAMINATION

TRIMESTER 1, 2018/2019

### BAC 2624 – MANAGEMENT ACCOUNTING II

(All sections / Groups)

19<sup>th</sup> October 2018  
9.00 a.m. – 12.00 p.m.  
(3 Hours)

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#### INSTRUCTIONS TO STUDENT:

1. This paper consists of **SIX (6)** pages excluding cover page with **4** Questions only.
2. Answer **ALL** questions.
3. All questions carry equal marks and the distribution of marks for each question is given.
4. Please write all your answers in the Answer Booklet provided.

**QUESTION 1****PART A**

Media University offers only high-tech graduate-level programs. Media University has two principal operating departments, Engineering and Computer Sciences, and two support departments, Facility and Technology Maintenance and Enrollment Services. The base used to allocate facility and technology maintenance is budgeted total maintenance hours. The base used to allocate enrollment services is number of credit hours for a department. The Facility and Technology Maintenance budget is RM350,000, while the Enrollment Services budget is RM950,000. The following chart summarizes budgeted amounts and allocation-base amounts used by each department:

	<b>Services Provided (Annually)</b>				
	<b>Budget</b>	<b>Engineering</b>	<b>Computer Sciences</b>	<b>F&amp;T Maintenance</b>	<b>Enrollment Service</b>
Engineering	RM3,500,000				
Computer Sciences	RM1,400,000				
F&T Maintenance (in hours)	RM350,000	2,000	1,000	Zero	5,000
Enrollment Service (in credit hours)	RM950,000	24,000	36,000	4,000	Zero

**Required:**

- Set up algebraic equations in linear equation form for each activity. (7 marks)
- Determine total costs for each department by solving the equations from part (i) using the reciprocal method. (3 marks)

**PART B**

The Green Company processes unprocessed goat milk up to the split-off point where two products, condensed goat milk and skim goat milk result. The following information was collected for the month of October:

*Direct Materials processed:* 104,000 gallons (after shrinkage)

*Production:* Condensed goat milk 45,500 gallons  
Skim goat milk 58,500 gallons

**Continued...**

<i>Sales:</i>	Condensed goat milk	RM5.00 per gallon
	Skim goat milk	RM4.50 per gallon

The costs of purchasing the unprocessed goat milk and processing it up to the split-off point to yield a total of 104,000 gallons of saleable product was RM186,480. There were no inventory balances of either product. Condensed goat milk may be processed further to yield 45,000 gallons (the remainder is shrinkage) of a medicinal milk product, Xyla, for an additional processing cost of RM4 per usable gallon. Xyla can be sold for RM19 per gallon.

Skim goat milk can be processed further to yield 57,200 gallons (the remainder is shrinkage) of skim goat ice cream, for an additional processing cost per usable gallon of RM4. The product can be sold for RM9 per gallon.

There are no beginning and ending inventory balances.

**Required:**

- Using estimated net realizable value, what amount of the joint costs would be allocated to Xyla and the skim goat ice cream?  
(8 marks)
- Show the operating income for each product.  
(2 marks)
- Explain the difference between a joint product and a byproduct. Can a byproduct ever become a joint product? Also, can a joint product ever become a byproduct?  
(5 marks)

**[TOTAL: 25 MARKS]**

**QUESTION 2**

**PART A**

Natural Resources produces specialty in herbs products. Its most popular product is Italian Herbs, a mixture of cooking herbs for seasoning. The direct materials used in Italian Herbs are rosemary and oregano. For each batch of 10 bottles, the budgeted quantities and budgeted prices of direct materials are as follows:

	Quantity for one batch	Price of input
Rosemary	18 tablespoons	RM5 per tablespoon
Oregano	30 tablespoons	RM2 per tablespoon

Changing the standard mix of direct material quantities does not significantly affect the overall end product. In addition, not all herbs added to production end up in the finished product, as some are rejected during inspection.

**Continued...**

In the current period, 250 bottles of Italian Herbs in 25 batches has been produced. The actual quantity, cost and mix of inputs are as follows:

	Actual quantity	Actual cost (RM)	Actual mix
Rosemary	1,200 tablespoons	5,400	15%
Oregano	6,800 tablespoons	27,200	75%

**Required:**

- i) What is the budgeted cost of direct materials for the 250 bottles? (4 marks)
- ii) Calculate the total direct materials efficiency and price variances. (4 marks)
- iii) Calculate the total direct materials mix and yield variances. (6 marks)
- iv) What are these variances telling you about the 250 bottles produced this period? Are the variances large enough to investigate? (5 marks)

**PART B**

Doodle Cleaners has been considering the purchase of an industrial dry-cleaning machine. The existing machine is operable for three more years and will have a zero disposal price. If the machine is disposed now, it may be sold for RM170,000. The new machine will cost RM360,000 and an additional cash investment in working capital of RM170,000 will be required. The new machine will reduce the average amount of time required to wash clothing and will decrease labor costs. The investment is expected to net RM130,000 in additional cash inflows during the first year of acquisition and RM290,000 each additional year of use. The new machine has a three-year life, and zero disposal value. These cash flows will generally occur throughout the year and are recognized at the end of each year. Income taxes are not considered in this problem. The working capital investment will not be recovered at the end of the asset's life.

**Required:**

- i) What is the net present value of the investment, assuming the required rate of return is 6% per annum? (*Present value table is provided*) (5 marks)
- ii) Would the company want to purchase the new machine? (1 mark)

**[TOTAL: 25 MARKS]**

Continued...

**QUESTION 3****PART A**

Judie Pharma manufactures hospital beds. Its most popular model, Deluxe, sells for RM5,000. It has variable costs totaling RM2,650 and fixed costs of RM1,200 per unit, based on an average production run of 5,000 units. It normally has four production runs a year, with RM400,000 in setup costs each time. Plant capacity can handle up to six runs a year for a total of 30,000 beds.

A competitor is introducing a new hospital bed similar to Deluxe that will sell for RM3,800. Judi Pharma's management believes it must lower the price to compete. Its marketing department believes that the lowered price will increase sales by 25% a year. The plant manager thinks that production can increase by 25% with the same level of fixed costs. The company currently sells all the Deluxe beds it can produce.

**Required:**

- i) What is the annual operating income from Deluxe at the current price of RM5,000?  
(4 marks)
- ii) What is the annual operating income from Deluxe if the price is reduced to RM3,800 and sales in units increase by 25%?  
(5 marks)
- iii) What is the target cost per unit for the new price if target operating income is 30% of sales?  
(3 marks)

**PART B**

Dawood Valley Company has two divisions, Computer Services and Consultancy Services. In addition to their external customers, each division performs work for the other division. The external fees earned by each division in 2017 were RM200,000 for Computer Services and RM350,000 for Consultancy Services. Computer Services worked 3,000 hours for Consultancy Services, who, in turn, worked 1,200 hours for Computer Services. The total costs of external services performed by Computer Services were RM110,000 and RM240,000 by Consultancy Services.

**Required:**

Determine the operating income for each division and for the company as a whole if the transfer price from Computer Services to Consultancy Services is RM15 per hour and the transfer price from Consultancy Services to Computer Services is RM12.50 per hour.

(13 marks)

**[TOTAL: 25 MARKS]**

**Continued...**

**QUESTION 4.****PART A**

Rasul was in the process of completing the quarterly planning for the purchasing department when a major computer malfunction lost most of his data. For direct material XX he was able to recover the following:

Average inventory level of XX	200
Orders per year	40
Average daily demand	48
Working days per year	250
Annual ordering costs	RM4,000
Annual carrying costs	RM6,000

Rasul purchases at the EOQ quantity level.

**Required:**

Determine the annual demand, the cost of placing an order, the annual carrying cost of one unit, and the economic order quantity (EOQ).

(9 marks)

**PART B**

i) Define backflush costing system.

(2 marks)

ii) Vision Enterprises manufactures converter boxes for high definition TVs. All processing is initiated when an order is received. For March there were no beginning inventories. Conversion Costs and Direct Materials are the only manufacturing cost accounts. Direct Materials are purchased under a just-in-time system. Backflush costing is used with a finished goods trigger point. Additional information is as follows:

Actual conversion costs	RM435,000
Standard materials costs per unit	RM115
Standard conversion cost per unit	RM85
Units produced	7,900 units
Units sold	7,600 units

**Required:**

Record all journal entries for the monthly activities related to the above transactions if backflush costing is used.

(9 marks)

iii) What are FIVE (5) features of a just-in-time manufacturing system?

(5 marks)

**[TOTAL: 25 MARKS]**

**Appendix**

<u>Periods</u>	<u>Present Value of \$1</u>								
	<u>4%</u>	<u>6%</u>	<u>8%</u>	<u>10%</u>	<u>12%</u>	<u>14%</u>	<u>16%</u>	<u>18%</u>	<u>20%</u>
1	.962	.943	.926	.909	.893	.877	.862	.847	.833
2	.925	.890	.857	.826	.797	.769	.743	.718	.694
3	.889	.840	.794	.751	.712	.675	.641	.609	.579
4	.855	.792	.735	.683	.636	.592	.552	.516	.482
5	.822	.747	.681	.621	.567	.519	.476	.437	.402
6	.790	.705	.630	.564	.507	.456	.410	.370	.335
7	.760	.665	.583	.513	.452	.400	.354	.314	.279
8	.731	.627	.540	.467	.404	.351	.305	.266	.233
9	.703	.592	.500	.424	.361	.308	.263	.225	.194
10	.676	.558	.463	.386	.322	.270	.227	.191	.162

<u>Periods</u>	<u>Present Value of a Series of \$1 Cash Flows</u>								
	<u>4%</u>	<u>6%</u>	<u>8%</u>	<u>10%</u>	<u>12%</u>	<u>14%</u>	<u>16%</u>	<u>18%</u>	<u>20%</u>
1	0.962	0.943	0.926	0.909	0.893	0.877	0.862	0.847	0.833
2	1.886	1.833	1.783	1.736	1.690	1.647	1.605	1.566	1.528
3	2.775	2.673	2.577	2.487	2.402	2.322	2.246	2.174	2.106
4	3.630	3.465	3.312	3.170	3.037	2.914	2.798	2.690	2.589
5	4.452	4.212	3.993	3.791	3.605	3.433	3.274	3.127	2.991
6	5.242	4.917	4.623	4.355	4.111	3.889	3.685	3.498	3.326
7	6.002	5.582	5.206	4.868	4.564	4.288	4.039	3.812	3.605
8	6.733	6.210	5.747	5.335	4.968	4.639	4.344	4.078	3.837
9	7.435	6.802	6.247	5.759	5.328	4.946	4.607	4.303	4.031
10	8.111	7.360	6.710	6.145	5.650	5.216	4.833	4.494	4.192

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